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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/075,644 | 02/13/2002 | Hiroyuki Saito | FUJY 19.428 | 9360 |

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| EXAMINER |
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GILLIS, BRIAN J

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| ART UNIT | PAPER NUMBER |
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2141

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/075,644 | SAITO ET AL. | |
| | Examiner | Art Unit | |
| | Brian Gillis | 2141 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 8, 12, 13, 15, 20, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Cunningham (US PGPUB #US2002/0087713).

(Claims 1 and 13 disclose) a communication band control system and method for executing communication band allocation control in a network in which communication bands are previously allocated to one or more users, said communication band control method comprising: an opening step for opening an unused portion of a communication band previously allocated to a certain user, to other users (Cunningham teaches of a bandwidth manager which enables bandwidth to be effectively assigned in a network which is already inherently assigned to an entity (paragraph 21, lines 1-8).); an acceptance step for accepting use requests of all or a part of the unused portion, from other users (Cunningham teaches of a bandwidth manager which accepts requests from data sources (paragraph 26, lines 1-3).); and an allocation alteration step for allocating all or a part of the unused portion that corresponds to use requests, to a

different user (Cunningham teaches of a bandwidth allocation interface which negotiates with the bandwidth manager for bandwidth (paragraph 27, lines 1-8)).

(Claims 3 and 15 disclose) a communication band control method and system according to claims 1 and 13, further comprising a contention processing step, responsive to a contention of use requests from a plurality of other users for the unused portion, for selecting a user having a highest use factor of the unused portion, as the different user to be allocated all or a part of the unused portion (Cunningham teaches of a bandwidth request being received with information such as the originator address, amount requested and the priority level of the traffic which is used in processing the request (paragraph 43, lines 7-9)).

(Claims 8 and 20 disclose) a communication band control method and system according to claims 1 and 13, wherein said acceptance step accepts a temporary use request of a communication band which is not previously allocated to a user, and conditions of complying with the use request (Cunningham teaches of a bandwidth manager which accepts use requests and a request processor which ensure the data source is complying in order to use the service (paragraph 42, lines 1-7).); said opening step opens the use request and conditions to other users (Cunningham teaches of a bandwidth manager which enables bandwidth to be effectively assigned in a network to other data sources (paragraph 21, lines 1-8).); said acceptance step accepts consents to the use request and conditions from other users (Cunningham teaches of a request processor which determines if there is enough bandwidth available by reviewing information of other data sources and grants the request if enough bandwidth is present

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(paragraph 41, lines 1-14).); and said allocation alteration step temporarily allocates communication bands previously allocated to other users who have given the consents to the use request and conditions, to the user who has issued the use request (Cunningham teaches of a request processor which grants the request after reviewing information from other data sources (paragraph 41, lines 1-14)).

(Claims 12 and 24 disclose) a communication band control method and system for executing communication band allocation control in a network in which communication bands are previously allocated to one or more users, said communication band control method comprising: an acceptance step for accepting a temporary use request of a communication band that is not previously allocated to a user, and conditions of complying with the use request (Cunningham teaches of a bandwidth manager which accepts requests from data sources (paragraph 26, lines 1-3).); an opening step for opening the use request and conditions to other users (Cunningham teaches of a bandwidth manager which enables bandwidth to be effectively assigned in a network to other data sources (paragraph 21, lines 1-8).); an allocation alteration step responsive to acceptance of consents to the use request and conditions from other users conducted in said acceptance step, for temporarily allocating communication bands previously allocated to the other users, to the user who has issued the use request (Cunningham teaches of a request processor which allocates the requested bandwidth to a user once there is an indication that sufficient bandwidth exists by analyzing usage of other data sources (paragraph 41, lines 1-14)).

Claims 11 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al (US PG PUB #US2003/0028641).

(Claims 11 and 23 disclose) a communication band control method and system for executing communication band allocation control in a network in which communication bands are previously allocated to one or more users, said communication band control method comprising: an acceptance step for accepting a use request containing information indicating a value of a communication band which is not previously allocated to a user and desired to be temporarily allocated within a predetermined time limit (Zhang et al teaches of an allocation process which reclaims unused bandwidth and if the amount is enough for the request the bandwidth is allocated to the user and it is inherent that the bandwidth is allocated to the user for a predetermined time (paragraph 39, lines 9-13).); and an allocation alteration step for allocating unused portions of communication bands previously allocated to users except the request user who has requested the use, to the request user, after acceptance of the use request, until a total value of the communication band temporarily allocated to the request user within the time limit reaches a value desired in the use request (Zhang et al teaches of an allocation process which reclaims unused bandwidth and will only grant the request when enough bandwidth has been reclaimed (paragraph 39, lines 1-13)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 9, 14, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham (US PG PUB #US2002/0087713) in view of Nitta (US PG PUB #US2002/0031094).

Claims 2 and 14 disclose a communication band control system and method according to claims 1 and 13, further comprising a rent billing step for billing rents to be paid to said certain user, for all or a part of the unused portion allocated temporarily to a different user, by the different user. Cunningham teaches of the limitations of claims 1 and 13 as recited above (paragraph 21, lines 1-8; paragraph 26, lines 1-3, paragraph 27, lines 1-8). It fails to teach of a rent billing step for billing rents to users. Nitta teaches of a gateway controller to determine the user fee for the quality of service used (paragraph 67, lines 5-15).

Cunningham and Nitta are analogous art because they are both related to bandwidth allocation.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the gateway controller in Nitta with the system in Cunningham because a user is charged this fee based on the convenience provided to the user which allows the owner to profit from others needing the bandwidth (Nitta paragraph 67, lines 13-15).

Claims 4 and 16 disclose a communication band control system and method according to claims 3 and 15, wherein said contention processing step derives a

product of a priority index and a use factor of the unused portion declared by each of the plurality of other users, for each of the other users, and selects a user having a largest product as a different user to be allocated all or a part of the unused portion, and said billing step bills a rent according to a priority index declared by the selected different user. Cunningham teaches of using a priority level to base allocation of bandwidth to data sources (paragraph 43, lines 7-9). It fails to teach of billing based on the priority. Nitta teaches of a system which charges a fee based on the type of service required (paragraph 69, lines 1-11).

Cunningham and Nitta are analogous art because they are both related to bandwidth allocation.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the fee system in Nitta with the system in Cunningham because the fee is able to be charged based on the convenience provided to the user (Nitta, paragraph 69, lines 10-11).

Claims 9 and 21 disclose a communication band control system and method according to claims 1 and 13, further comprising a fee billing step, responsive to a communication band allocation alteration conducted by said allocation alteration step, for billing at least a user of the alteration destination for a fee. Cunningham teaches of the limitations of claims 1 and 13 as recited above (paragraph 21, lines 1-8, paragraph 26, lines 1-3, paragraph 27, lines 1-8). It fails to teach of a fee billing step for billing a user of the alteration destination a fee. Nitta teaches of a gateway controller, which determines a fee for using the communication system (paragraph 50, lines 1-4).

Cunningham and Nitta are analogous art because they are both related to bandwidth allocation.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the gateway controller in Nitta with the system in Cunningham because the fee is able to be charged based on the convenience provided to the user (Nitta, paragraph 53, lines 1-4).

Claims 5, 6, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham (US PG PUB #2002/0087713) in view of Marshall et al (US Patent #5,673,393).

Claims 5 and 17 disclose a communication band control system and method according to claims 1 and 13, wherein said acceptance step accepts a nonpreferential use request and an allocation alteration step allocates unused portions to the nonpreferential user. Cunningham teaches of the limitations of claims 1 and 13 as recited above (paragraph 21, lines 1-8, paragraph 26, lines 1-3, paragraph 27, lines 1-8). It fails to teach of accepting a request and allocating unused portions to a nonpreferential user. Marshall et al teaches of a caller specifying a maximum amount of bandwidth required, after a certain period of time of inactivity the bandwidth is ready to be allocated again and allocates unused portions to other users while this request is occurring (column 3, lines 43-46, column 4, lines 1-5, column 9, lines 62-67, figure 6).

Cunningham and Marshall et al are analogous art because they are both related to bandwidth management.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the acceptance and allocation steps in Marshall et al with the system in Cunningham because efficient management of the allocation of the bandwidth available is necessary for multiple data sources to be able to use the finite bandwidth (Marshall, column 1, lines 48-51).

Claims 6 and 18 disclose a communication band control system and method according to claims 3 and 15, wherein said allocation alteration step contains a time limit so other users may request usage, allocating a remaining part to one of the other users, and said allocation alteration step allocates unused portions of communication bands opened to public thereafter and previously allocated to users except the nonpreferential user, to the nonpreferential user until a total value of the communication band allocated to the nonpreferential user within the time limit reaches a communication band desired in the use request. Cunningham teaches of the limitations of claims 3 and 15 as recited above (paragraph 43, lines 7-9). It fails to teach of using a time limit in order to allocate the remaining bandwidth to the other users. Marshall et al teaches of incrementing timestamps at regular intervals and if the time exceeds the threshold the bandwidth is freed and other users requests are allowed (column 3, lines 43-46, column 4, lines 51-57, figure 6).

Cunningham and Marshall et al are analogous art because they are both related to bandwidth management.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the allocation process in Marshall et al with the system in

Cunningham because efficient management of the allocation of the bandwidth available is necessary for multiple data sources to be able to use the finite bandwidth (Marshall, column 1, lines 48-51).

Claims 7, 10, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham (US PG PUB #2002/0087713) in view of Fujinuma (US PG PUB #2004/0056888).

Claims 7 and 19 disclose a communication band control system and method according to claims 1 and 13, further comprising a creation step for creating a virtual matrix to represent allocated units of bandwidth. Cunningham teaches of the limitations of claims 1 and 13 as recited above (paragraph 21, lines 1-8, paragraph 26, lines 1-3, paragraph 27, lines 1-8). It fails to teach of a visual representation of the status of the system. Fujinuma teaches of a display, which shows which areas are allocated and allows changes, releases and creation of allocations (figure 2).

Cunningham and Fujinuma are analogous art because they are both related to the allocations of network resources.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display in Fujinuma with the system in Cunningham because it allows the information to be clearly and easily displayed (Fujinuma, paragraph 56, lines 1-5).

Claims 10 and 22 disclose a communication band control system and method according to claims 1 and 13, wherein said opening step opens a situation of a communication band previously allocated to a certain user, to users via Internet in such

a state as to reflect the unused portion and a portion for which the use request has been made. Cunningham teaches of the limitations of claims 1 and 13 as recited above (paragraph 21, lines 1-8, paragraph 26, lines 1-3, paragraph 27, lines 1-8). It fails to teach of using a visual display to show users allocation information over the Internet. Fujinuma teaches of displaying the data to managers at various remote locations (paragraph 27, lines 1-3).

Cunningham and Fujinuma are analogous art because they are both related to the allocations of network resources.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display in Fujinuma with the system in Cunningham because it allows the information to be clearly and easily displayed (Fujinuma, paragraph 56, lines 1-5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McClure et al (US Patent #5,867,663) teaches of controlling network service parameters. Allen (US Patent #6,850,965) teaches of optimal multimedia content delivery over a network. Rakoshitz et al (US Patent #6,578,077) teaches of a traffic monitoring tool for bandwidth management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Gillis whose telephone number is 571-272-7952. The examiner can normally be reached on M-F 7:45-4:15.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Gillis
Examiner
Art Unit 2141

BJG


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER